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ABSTRACT

This module on applying curriculum specifics to vocational education is one of a set of four on stages and structure of curriculum development and is part of a larger series of thirty-four modules comprising a core curriculum intended for use in the professional preparation of vocational educators in the areas of agricultural, business, home economics, and industrial education. Following the module objective and overview and a bibliography of suggested resource materials (readings) for the entire module, four lessons are presented: (1) selection of specific clientele and plans for a segment of curriculum material; (2) job analysis; (3) objectives; and (4) curriculum product. Each lesson contains the objective, overview, a list of suggested learning activities, and a list of suggested resources (readings). Concluding the module is a pre/posttest and an answer key. (The modules have been field tested in various educational settings, including bachelor and masters degree programs, and are considered adaptable to many instructional styles and student entry levels. CE 018 935-937 contain working papers and other materials used in the development of the module series.) (JH)

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Common Core Curriculum
for Vocational Education

F-3

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

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Category F:

STAGES AND STRUCTURE OF CURRICULUM DEVELOPMENT

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1978

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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ABOUT THIS MODULAR CURRICULUM

This module is one of a series of 34 modules intended for use in the professional preparation of vocational educators in the vocational education service areas of agricultural, business, home economics, and industrial education. The curriculum can be adapted to various styles of instruction and to various entry-levels of students.

It is recommended that an instructor planning to use these modules review each category to determine if any modification is needed in the objectives and suggested activities so that they conform with local institutional policies and/or vocational education programs. It is also suggested that resources and activities be identified for the specific entry-level of the student to be served.

The activities listed are suggested. The use of any other activity or reading reference which the instructor believes would help to accomplish the objectives of that lesson is encouraged. The choice of the teacher to use the entire module, either through group reports or individualized assignment, will be related to individual student competency requirements.

Since many modules strongly recommend the use of local administrative personnel and community rsources, it is suggested that all site visitations and requests for assistance in the community be coordinated by or cleared through the instructor. The instructor may wish to distribute these tasks among the student group and across the community with the class report system being used to disseminate the information gathered.

These modules have been field tested in various settings. They have been used with students working toward a bachelor's or master's degree and with students seeking the designated subjects credential in California. Some modules were tested through student independent study, others as part of total class assignment, and still others as an alternate activity. Workshop participants examined the materials in terms of content, activities, and resources. The adaptability of this curriculum is one of its strengths.

The materials could not have been completed without the participation and contribution of many individuals. Chief among these persons were the module writers, workshop participants, field-test instructor, and students. Conference presentors and evaluators also contributed to this project. Proceedings of the workshop are available upon request.

If we can provide you with information or help in using this curriculum, please feel free to contact us.

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COMMON CORE CURRICULUM

FOR

VOCATIONAL EDUCATION

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APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

Module Objective

Upon the satisfactory completion of this module, the student preparing to become a vocational education teacher will be able to:

(1) Develop an individualized competency-based curriculum model or unit to meet the needs of a specific student or group of students based upon available information and educational trends.

Module Overview

In this module you will have the opportunity to develop a segment of a total curriculum that might be innovative or used experimentally in individualizing material to meet the needs of a selected clientele. What is taught in the classroom and how it is taught is basically the decision and responsibility of the teacher and herein lies the challenge.

Several kinds of materials may give you an idea. For instance, the Vocational Education Amendments of 1976 bring into focus some new directions. District plans for Vocational Education have valuable data, as do material collected in completion of previous modules, other types of curriculum materials, and taped interviews with counselors and administrators.

This module has been divided into four lessons:

(1) Selection of Specific Clientele and Plans for a Segment of Curriculum Material

(2) Job Analysis

(3) Objectives

(4) Curriculum Product

Resource Materials for Completing the Activities in this Module

American Vocational Journal, 51, No. 8, (November) 1976.

California Business Education Program Guide for Office and Distributive Occupations. Sacramento: Bureau of Business Education, California State Department of Education, 1973.

Cotrell, Calvin J.; Shirley A. Chase; and Marilyn J. Molnar. Model Curricula for Vocational and Technical Teacher Education: Report No. V, General Objectives, Set II. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1972.

Curriculum Design for Consumer Education, Kindergarten Through Grade Fourteen. Sacramento: California State Department of Education, 1974.

Davies, Ivor K. Competency Based Learning: Technology Management and Design. New York: McGraw-Hill: 1973.

Fine, S. A., and W. W. Wiley. An Introduction to Functional Job Analysis. Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research, 1972.

Fleck, Henrietta. Toward Better Teaching of Home Economics. (2nd ed.). New York: Macmillan, 1974.

Houston, W. R.; and R. B. Howsam. Competency-Based Teacher Education. Chicago: Science Research Associates, 1972.

INCINCE Design of Curriculum Models in Consumer Education for Consumer and Homemaking Education. Sacramento: Bureau of Homemaking Education, California State Department of Education, 1976.

Introduction to Agriculture, California Vocational Agriculture Curriculum Guidelines, (2nd ed.). San Luis Obispo, California: Vocational Education Productions, California Polytechnic State University, 1976.

Kapfer, Miriam B., (ed.). Behavioral Objectives in Curriculum Development, Selected Readings, and Bibliography. Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Kazanas, James N.; C. Harris; Dale Lemons et al. The Philosophy & Foundations of Vocational Education. New York: MSS Information Corporation, 1973.

Krathwohl, D. R.; B. S. Bloom; and B. B. Masia. A Taxonomy of Educational Objectives: Handbook II, The Affective Domain. New York: David McKay, 1964.

Mager, Robert F. Preparing Instructional Objectives. (2nd ed.). Belmont, California: Fearon Publishers, 1967.

Mager, Robert F., and Kenneth M. Beach, Jr. Developing Vocational Instruction. Belmont, California: Fearon Publishers, 1967.

Simpson, Elizabeth J. "The Classification of Educational Objectives: Psychomotor Domain." Illinois Teacher of Home Economics 10 (1966) 110-144.

State of California. California Five-Year State Plan for Vocational Education: A Planning Process. Sacramento: California State Department of Education, 1977.

Tanner, Daniel, and Laurel Tanner. Curriculum Development. New York: Macmillan, 1975.

U. S. Department of Labor, Manpower Administration. Dictionary of Occupational Titles. (3rd ed.). Washington, D. C.: Government Printing Office, 1965.

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

Lesson One: Selection of Specific Clientele and Plans for a Segment of Curriculum Material

Objective

Upon the satisfactory completion of this lesson, the student will select a specific population and demonstrate his/her ability to plan appropriate material for these students.

Overview

Time should be spent in "brainstorming" in order to discover what needs to be done in vocational education and how it can best be done. The result may be (1) a structured unit developed within a specified curriculum design; or (2) a revision of a selected course offered today; or (3) a plan for an interdepartment approach to selected units in vocational education including request for funds; or (4) a proposal for developing curriculum. The module or unit may be developed for secondary, post-secondary, or adult curriculum.

The plan submitted to the instructor is to include a description of specific clientele, the rationale, and the objectives of the curriculum segment to be developed in terms of your stated purpose.

Suggested Activities

(1) Review Public Law 94-482 and/or articles pertaining to new legislation, such as those presented in American Vocational Journal, November, 1976.

(2) Describe in detail the population and setting selected for module/unit/lesson development. The case and setting may be selected from:

   a. District profiles of a vocational education program

   b. Materials collected from other courses, modules, lessons

   c. Interviews with a local vocational education administrator

(3) Using Mager's Developing Vocational Instruction, outline a tentative plan of action, including selection of curriculum design.

(4) Describe in detail a plan to incorporate one of the curriculum priorities identified in the California Five-Year State Plan for Vocational Education.

(5) Select clientele and interview the group leader (teacher); outline offerings and organize into a sequential and integrated pattern to meet the needs of the learner. Discuss this plan with the person interviewed and consider suggestions for change of curriculum developed.

(6) Review curriculum materials for a special group such as the handicapped or disadvantaged, or economically depressed area students; adapt for your selected group.

(7) If you are interested in consumer and homemaking education programs, review EDA Strand of MATCHE curriculum and select appropriate activities for your clientele.

(8) Select your own project for curriculum development. Discuss with instructor.

Suggested Resources

Cotrell, Calvin J.; Shirley A. Chase; and Marilyn J. Molnar. Model Curricula for Vocational and Technical Teaching Education: Report No. V, General Objectives, Set II. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1972.

Kazanas, James N.; C. Harris; Dale Lemons et al. The Philosphy & Foundations of Vocational Education. New York: MSS Information Corporation, 1973.

Mager, Robert F., and Kenneth M. Beach, Jr. Developing Vocational Instruction. Belmont, California: Fearon Publishers, 1967.

Public Law 94-482, Education Amendments of 1976. Sacramento: California State Department of Education.

State of California. California Five-Year Plan for Vocational Education: A Planning Process. Sacramento: California State Department of Education, 1977.

U. S. Department of Labor, Manpower Administration. Dictionary of Occupational Titles. (3rd ed.). Washington, D. C.: Government Printing Office, 1965.

U. S. Office of Education. A Guide to the Development of Vocational Education Programs and Services for the Disadvantaged. Washington, D. C.: Government Printing Office, 1969.

Work Experience Education, A Handbook for California Secondary Schools, Sacramento: California State Department of Education, 1972.

Upon successful completion of assigned activities, proceed to Lesson 2.

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

Lesson Two: Job Analysis

Objective

Upon satisfactory completion of this lesson, the vocational student will be able to demonstrate the use of job and task analysis in developing vocational education curriculum.

Overview

F. W. Taylor analyzed jobs by the use of systematic observation, classification, and tabulation of job activities in a study of the steel industry in 1885; The Principles of Scientific Management, 1919. The U. S. Employment Service used job analysis techniques to analyze 54,000 jobs between 1934-39. The Dictionary of Occuptional Titles (DOT) is a summary of this study. Information obtained from job analysis is used by DOT to define jobs in terms of what is done, how it is done, and why it is done. DOT is a source of information about job functions performed by the worker, the aptitudes, interests, and temperament required by the job; the physical demands placed on the worker; the conditions under which the worker must function.

Robert Mager, in Developing Vocational Instruction, 1967, defines a task as a logically related set of actions required for the completion of a job objective. In task analysis all of the tasks are listed in terms of what is done on the job. From this list Mager suggests identifying the type of performance and the learning difficulty so that a time schedule may be prepared for teaching each task.

Suggested Activities

(1) Make a job analysis.

(2) Write a job description.

(3) Develop a list of tasks appropriate for the job by using DOT, or by making a systematic observation of an individual working on the job, or by talking with the person performing the job or his supervisor.

(4) Apply the principle of task analysis to your special project or plan.

Suggested Resources

Cotrell, Calvin J.; Shirley A. Chase; and Marilyn J. Molnar. Model Curricula for Vocational and Technical Teacher Education: Report No. V, General Objectives, Set II. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1972.

Davies, Ivor K. Competency Based Learning: Technology, Management, and Design. New York: McGraw-Hill, 1973.

Fine, S. A., and W. W. Wiley. An Introduction to Functional Job Analysis. Kalamazoo, Michigan: The W. E. Upjohn Institute for Employment Research, 1971.

Mager, Robert F., and Kenneth M. Beach, Jr. Developing Vocational Instruction. Belmont, California: Fearon Publishers, 1967.

U. S. Department of Labor, Manpower Administration. Dictionary of Occupational Titles. (3rd ed.). Washington, D. C.: Government Printing Office, 1965.

U. S. Office of Education. A Guide to the Development of Vocational Education Programs and Services for the Disadvantaged. Washington, D. C.: Government Printing Office, 1969.

Upon successful completion of assigned activities, proceed to Lesson 3.

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

Lesson Three: Objectives

Objective

Upon satisfactory completion of this lesson, the vocational student will be able to demonstrate the ability to write performance objectives for a specific program.

Overview

Behavioral objectives and educational practices are governed by what the school seeks to achieve. Basically, the majority of writers agree that a behavioral objective: (1) must be stated in terms of the student; (2) must state the behavior the student is to perform; (3) must list the conditions under which the behavior is to be performed; (4) must list the criteria the student must achieve in order to successfully accomplish the task.

Suggested Activities

(1) Review Mager, Developing Vocational Implications, and A Taxonomy of Educational Objectives by Krathwohl and Bloom in preparation for writing behavioral objectives.

(2) Write at least five performance objectives for selected areas of vocational education. Have a classmate criticize the objectives; rewrite if necessary. Discuss with your instructor.

(3) Read Ralph W. Tyler, "The Father of Behavioral Objectives, Criticizes Them: An Interview," Phi Delta Kappan, Vol. 50, September, 1973, 57. What purpose are behavioral objectives serving today? How does Tyler assess the use of behavioral objectives? Do you agree with him? State your agreement or disagreement in writing.

Suggested Resources

California Business Education Program Guide for Office and Distributive Occupations. Sacramento: Bureau of Business Education, California State Department of Education, 1973.

Cotrell, Calvin J.; Shirley A Chase; and Marilyn J. Molnar. Model Curricula for Vocational and Technical Teacher Education: Report No. V, General Objectives, Set II. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1972.

Curriculum Design for Consumer Education, Kindergarten Through Grade Fourteen. Sacramento: California State Department of Education, 1974.

Introduction to Agriculture, California Agriculture Curriculum Guidelines. (2nd ed.). San Luis Obispo, California: Vocational Education Productions, California Polytechnic State University, 1976.

Kapfer, Miriam B. (ed.). Behavioral Objectives in Curriculum Development, Selected Readings and Bibliography. Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Krathwohl, D. R.; B. S. Bloom; and B. B. Masia. A Taxonomy of Educational Objectives: Handbook II, The Affective Domain. New York: David McKay, 1964.

Mager, Robert F. Preparing Instructional Objectives. (2nd ed.). Belmont, California: Fearon Publishers, 1975.

Mager, Robert F., and Kenneth M. Beach, Jr. Developing Vocational Instruction. Belmont, California: Fearon Publishers, 1967.

Simpson, Elizabeth J. "The Classification of Educational Objectives: Psychomotor Domain," Illinois Teacher of Home Economics 10 (1966), 110-144.

Upon successful completion of assigned activities, proceed to Lesson 4.

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

Lesson Four: Curriculum Product

Objective

The vocational education student will be able to demonstrate the ability to use data and resources in developing a competency-based curriculum module.

Overview

This lesson is the culmination of activities completed for this module. The report prepared may include many of your past educational experiences or it may serve as a review of curriculum studies.

Suggested Activities

(1) Prepare a report including data and resources used and a sample of final curriculum material. Present to instructor or class. Evaluate the report using any evaluation form acceptable to the instructor.

This final presentation will serve as posttest for this module.

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

MODULE PRE/POSTTEST

Student_____

Instructor_____

Date_____

Student:	This pre/posttest is designed to assess your knowledge of application of curriculum specifics to vocational education. Since this module is an individualized and competency-based learning device, you will need to study only those lessons that are presented on the basis of your response to this test.

1. List the main steps in sequential order to be taken in developing curriculum.

2. Define and give examples of the following:

   a. Concept

   b. Generalization

   c. Competency-based objectives

   d. Performance objective

3. Describe the characteristics of individualized curriculum.

Pre/posttest (continued)

4. List five types of available curriculum resource materials.

   a.

   b.

   c.

   d.

   e.

5. Define job analysis and job description; explain how each is used in curriculum development.

6. What is meant by the following statement: "Program meets state standards."

APPLYING CURRICULUM SPECIFICS TO VOCATIONAL EDUCATION

ANSWER KEY
MODULE PRE/POSTTEST

Instructor:	Do not reproduce this page in students' booklets. You must retain it for grading and prescriptive purposes. Answers will vary with individuals. A preferred response might be similar to the answer presented.

1. (L1) The steps to be taken in developing curriculum are described in varying terms by Robert Mager in Developing Vocational Instruction, 1967: Specification of the desired results; development of an instrument by which success can be measured; development procedures, lessons, and materials designed to achieve the specified result; and procedures to insure the continual improvement of course effectiveness.

2. (L3) a. Concept: A concept is defined as a general idea that is formed about several experiences.

b. Generalization: "Generalizations are broad summary statements which unify specific facts and show relationships between ideas. Since generaliations are abstract, they have meaning in a number of situations. Thus, they can be viewed as a core around which a variety of subject matter areas can be developed." Maximizing Human Potential. California State Department of Education, 1977.

c. Competency-based: "Competency-based is a movement as some see as the more comprehensive of the alternative terms and hence as the more capable of including the wide range of types of objectives and of abilities to perform....The two terms competency-based and performance-based remain synonymous and hence subject to personal choice." W. R. Houston and R. B. Howsam, Competency-Based Teacher Education, 1972, p. viii.

d. Performance objective: The characteristics of a useful performance objective, according to R. F. Mager, Preparing Instructional Objectives, 1975, p. 23, are: (1) performance (what the learner is able to do); (2) conditions (important conditions under which the performance is expected to occur); (3) criterion (the quality of performance that will be considered acceptable).

3. (L1) Two examples are: (1) the Kiva Plan, which was an exploratory curriculum probe initiated by an enterprising principal to serve a single school, with about thirty children from an affluent community. This

Pre/Posttest Answer Key (continued)

curricula focused upon the very able learner. (2) The Winnetka plan, which is an individualized curricula, which pioneered in self-teaching materials, individualized instruction, and programmed learning. As the program was developed, the student worked at his own pace but would have to complete a given step in the program without error. He was responsible for self-checking and assumed a large role in achieving mastery by himself. Time could vary but mastery or quality was more constant.

4. (L4) Available curriculum materials:

a. References on instructional techniques and procedures
b. Media
c. Guides/course outlines
d. Curriculum design
e. Outlines of concepts and generalization
f. Instructional patterns
g. Guidelines
h. Periodicals and journals
i. Models

5. (L2) Job analysis is the process of determining and reporting pertinent information relating to the nature of a specific job. Jobs can be analyzed by use of systematic observation, classification, and tabulation of job activities. Through job analysis a logical procedure can be outlined for presenting content and training for specific skills.

6. (L1) As a condition of eligibility for federal funds a local educational agency's vocational education program must meet program standards as outlined in the state plan. These standards result from recommendations made by many ad hoc advisory committees.

MODULES -- COMMON CORE CURRICULUM FOR VOCATIONAL EDUCATION

Category A: Introduction to Vocational Education

- A-1 History, Philosophy, and Trends in Vocational Education
- A-2 Scope, Function, and Organization in Vocational Education
- A-3 Vocational Legislation
- A-4 Assessing the Job Market and Employment Trends

Category B: Cooperative Relationship

- B-1 Rationale for Cooperative Relationships
- B-2 Advisory Councils
- B-3 Cooperative and Work Experience Programs

Caregory C: Vocational Students

- C-1 Promoting Vocational Education and Recruiting Eligible Students for Vocational Education
- C-2 Assessing Students' Personal Characteristics
- C-3 Guidance and Counseling
- C-4 Assisting Students with Special Needs in Vocational Education Program
- C-5 Assessing the Needs of the Disadvantaged Student
- C-6 Developing Student Leadership Qualities in Vocational Education Programs
- C-7 Student Organizations

Category D: Administration and Supervision

- D-1 Fiscal Management of a Vocational Education Program
- D-2 Writing a Vocational Education Project/Budget
- D-3 Record Keeping in Vocational Programs
- D-4 Conference Leadership
- D-5 Selection, Supervision, and Evaluation of Personnel
- D-6 School Law and Its Relationship to Vocational Education
- D-7 Staff Development
- D-8 Implementation of Change

Category E: Curriculum Design in Vocational Education

- E-1 Developing a Curriculum Design in Vocational Education
- E-2 Applying Learning Theory to Vocational Education
- E-3 Instructional Strategies

Category F: Stages and Structure of Curriculum Development

- F-1 Theories in Curriculum Development
- F-2 Building a Curriculum for Vocational Education
- F-3 Applying Curriculum Specifics to Vocational Education
- F-4 Safety

Category G: Evaluation and Research

- G-1 Evaluation Models
- G-2 Evaluation Procedures for Local Programs
- G-3 Introduction to Research Procedures in Vocational Education
- G-4 Research Design in Vocational Education
- G-5 Development of a Research Proposal in Vocational Education